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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,268	10/22/2001	Mark Kevitt Debe	52955US011	5103
32692 7590 05/17/2007 3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			EXAMINER RUTHKOSKY, MARK	
			ART UNIT 1745	PAPER NUMBER
			NOTIFICATION DATE 05/17/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/014,268

Applicant(s)

DEBE, MARK KEVITT

Examiner

Mark Ruthkosky

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 1-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 31-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2/12/2002 and 12/15/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement filed 2/12/2002 and 12/15/2006 has been placed in the application file, and the information referred to therein has been considered as to the merits.

Drawings

The drawings filed on 10/22/2001 have been approved.

Election/Restrictions

Applicant's election with traverse of Group III in the reply filed on 4/4/2007 is acknowledged. The traversal is on the ground(s) that the claims are interrelated and a search of the prior art will reveal art of the other. This is not found persuasive because the inventions are distinct as noted in the restriction paper. Applicant has acknowledged that additional consideration would be necessary for each group. These distinct inventions will require different searches and although some areas of search may overlap, each search will require reviewing art not required by the other inventions. The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Pedrick (GB 1,439,440.)

The instant claims are to an apparatus for delivering gas at a controlled rate comprising

a) an article comprising at least one containment means comprising pressurized gas-filled microbubbles, said gas being releasable on demand,

b) a means for causing release of said gas from said microbubbles by fracturing, and

c) a feedback and control means for releasing gas to an electrochemical power device at a controlled rate determined by a load.

Pedrick (GB 1,439,440) teaches an apparatus for delivering gas at a controlled rate comprising an article with at least one containment means comprising pressurized gas-filled microbubbles, said gas being releasable on demand (claims 1-4), a means for causing release of said gas from said microbubbles by fracturing (page 3, col. 1), and a feedback and control means for releasing gas to an electrochemical power device at a controlled rate determined by a load

Art Unit: 1745

(page 2, col. 1, lines 35-end; col. 2, line 90-end.) A fracture release mechanism is taught for releasing the fuel. Engines are well known to inherently include a throttle that releases fuel in response to the need required by the engine. Thus, the claims are anticipated.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Monsler et al. (Fuel Cells for Transportation TOPTEC, as submitted by applicant in their disclosure of prior art) in view of Ishimaru et al (US 5,432,710) OR Scheffler et al. (US 5,009,967.)

Monsler et al. teaches an apparatus for delivering gas at a controlled rate comprising an article with at least one containment means comprising pressurized gas-filled microbubbles, said gas being releasable on demand, a means for causing release of said gas from said microbubbles by fracturing (pages 4-5.) The reference does not teach a feedback and control means for releasing gas to an electrochemical power device at a controlled rate determined by a load. Ishimaru et al (US 5,432,710, see figure 1, the abstract and the claims) and Scheffler et al. (US 5,009,967, see claims 1-4) teach feedback and control means for releasing gas to an electrochemical power device at a controlled rate determined by a load. Various detectors and processors are noted. The controllers supply a fuel to a load in an efficient manner. It would have been obvious to one of ordinary skill in the art at the time the invention was made to a

Art Unit: 1745

feedback and control means for releasing gas to an electrochemical power device at a controlled rate determined by a load in order to supply a fuel to a load in an efficient manner, so as not to undersupply the load or to oversupply the load and waste fuel not used by the load. The artisan would have found the claimed invention to be obvious in light of the teachings of the references.

Examiner Correspondence

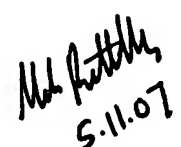
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Ruthkosky whose telephone number is 571-272-1291. The examiner can normally be reached on FLEX schedule (generally, Monday-Thursday from 9:00-6:30.) If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached at 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free.)

Mark Ruthkosky

Primary Patent Examiner

Art Unit 1745

Handwritten signature of Mark Ruthkosky and date 5.11.07